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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMES R. STINGER

Appeal 2009-005286
Application 10/693,403
Technology Center 2100

Decided: September 16, 2009

Before JAMES D. THOMAS, ST. JOHN COURTENAY, III, and
THU A. DANG, *Administrative Patent Judges*.

DANG, *Administrative Patent Judge*.

DECISION ON APPEAL

I. STATEMENT OF CASE

Appellant appeals the Examiner's final rejection of claims 1, 3, 5, 7, 9, 12, and 15-20 under 35 U.S.C. § 134(a) (2002). We have jurisdiction under 35 U.S.C. § 6(b) (2002).

We affirm.

A. INVENTION

According to the Appellant, the invention relates to a “method for automatically detecting table data in a document that is described by a page definition language and converting the table data into a markup language representation” (Spec. 27, ll. 2-4).

B. ILLUSTRATIVE CLAIM

Claim 1 is exemplary and reproduced below:

1. A computer-implemented method of identifying table data in a document comprising the steps of:

receiving a page description language representation of the document for providing a list of words in the document and position information for the words; and

automatically identifying table data in the document based on the page description language representation of the document and at least one table identifying feature, wherein the identifying step includes,

dividing the document into one or more pages;

dividing each page into a plurality of lines;

for each line, clustering the words of the line into one or more word clusters, wherein each cluster includes one or more words, each cluster having a horizontal beginning point, horizontal midpoint, and horizontal end point;

for clusters in the plurality of lines, comparing alignment of the horizontal beginning point, horizontal midpoint, and horizontal end point of clusters between lines, wherein a cluster in a first line is aligned with a

cluster in a previous line if at least one of the horizontal beginning point, horizontal midpoint, and horizontal end point of the cluster in the first line is aligned with at least one of the horizontal beginning point, horizontal midpoint, and horizontal end point of the cluster in the previous line; and

identifying a line as being part of a table in response to more than one cluster of the line being aligned with clusters of previous lines identified as part of the table; and

outputting data descriptive of the lines of the table.

C. REJECTION

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Alam	U.S. 6,336,124	Jan. 1, 2002 (filed as Jul. 7, 1999)
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Claims 1, 3, 5, 7, 9, 12, and 15-20 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Alam.

II. ISSUES

- 1) Has Appellant shown the Examiner erred in finding that Alam teaches “comparing alignment of the horizontal beginning point, horizontal midpoint, and horizontal end point of clusters between lines” (claim 1)?
- 2) Has Appellant shown the Examiner erred in finding that Alam teaches “identifying a line as being part of a table in response to more than one cluster of the line being aligned with clusters of previous lines identified as part of the table” (claim 1)?

III. FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

Alam

1) Alam converts an input format of a document to a different output format by grouping data of the input format into one or more intermediate format blocks representing paragraphs, lines, words, tables, and images (Abstract).

2) In joining page lines into paragraphs, Alam determines if the left-most, right-most, and middle (average) X-coordinates of a current page line are aligned with those coordinates of a previous page line within a paragraph (col. 10, l. 64 – col. 11, l. 30).

3) Alam locates tables and determines their upper and lower boundaries by evaluating the document's horizontal projection profile, i.e., measuring white space in the horizontal direction (col. 12, ll. 45-52).

IV. PRINCIPLES OF LAW

Claim Interpretation

The claims measure the invention. *See SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). “[T]he PTO gives claims their ‘broadest reasonable interpretation.’” *In re Bigio*, 381 F.3d 1320, 1324 (Fed. Cir. 2004) (quoting *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000)). “Moreover, limitations are not to be read into the claims from the specification.” *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993) (citing *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989)).

“An intended use or purpose usually will not limit the scope of the claim because such statements usually do no more than define a context in which the invention operates.” *Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 320 F.3d 1339, 1345 (Fed. Cir. 2003).

35 U.S.C. § 102

In rejecting claims under 35 U.S.C. § 102, “[a] single prior art reference that discloses, either expressly or inherently, each limitation of a claim invalidates that claim by anticipation.” *Perricone v. Medicis Pharm. Corp.*, 432 F.3d 1368, 1375 (Fed. Cir. 2005) (citation omitted).

“Anticipation of a patent claim requires a finding that the claim at issue ‘reads on’ a prior art reference.” *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 1346 (Fed Cir. 1999). “In other words, if granting patent protection on the disputed claim would allow the patentee to exclude the public from practicing the prior art, then that claim is anticipated, regardless of whether it also covers subject matter not in the prior art.” *Id.* (citations omitted).

V. ANALYSIS

Claims 1, 5, 7, 12, and 16

With respect to claim 1, Appellant argues that Alam does not teach “comparing alignment of the horizontal beginning point, horizontal midpoint, and horizontal end point of clusters between lines” because “[w]here Alam does look at X coordinates of words on lines, the use does not include comparison of any horizontal midpoint of a word, and that use is not for the purpose of identifying a line as being part of a table” (Br. 8). However, the Examiner finds that Alam’s teaches such step (Ans. 17-18). Accordingly, an issue we address on appeal is whether Alam teaches

“comparing alignment of the horizontal beginning point, horizontal midpoint, and horizontal end point of clusters between lines” (claim 1).

We begin our analysis by giving the claims their broadest reasonable interpretation. *See In re Bigio*, 381 F.3d at 1324. Furthermore, our analysis will not read limitations into the claims from the specification. *See In re Van Geuns*, 988 F.2d at 1184.

Contrary to Appellant’s arguments, claim 1 does not require a “comparison of any horizontal midpoint of a word” (Br. 8; Board’s emphasis). Rather, claim 1 requires comparing the horizontal beginning, middle, and end points of “clusters” having one or more words. Accordingly, we will not read such “midpoint of a word” limitation into claim 1.

Further, claim 1 does not require this comparison to be “for the purpose of identifying a line as being part of a table” as Appellant argues (Br. 8). Rather, claim 1 recites “automatically identifying table data . . . , wherein the identifying step includes” this comparison. Again, we will not read such purpose of identifying “as part of a table” limitation into claim 1.

Furthermore, we note that such purpose of identifying is also an intended use of the comparison. Thus, even assuming that the comparison has a purpose of identifying table data, such an intended use merely defines its context and does not limit the scope of claim 1. *See Boehringer*, 320 F.3d at 1345.

Alam converts a document’s input format to a different output format by grouping data of the input format into blocks of paragraphs, lines, words, tables, and images (FF 1). In joining page lines into paragraphs, Alam determines if the left-most, right-most, and middle X-coordinates of a

current page line are aligned with those coordinates of a previous page line (FF 2). A skilled artisan would have understood this process of Alam as “comparing alignment of the horizontal beginning point, horizontal midpoint, and horizontal end point of clusters between lines” (claim 1), where “clusters between lines” reads on the joined current and previous page lines of a paragraph.

Alam determines the upper and lower boundaries of tables by evaluating a document’s horizontal projection profile, i.e., measuring white space in the horizontal direction (FF 3). We find this process compares the alignment of the beginning, middle, and/or end points of page lines because a document’s horizontal projection profile is controlled by the alignment and shifting of page lines, e.g., aligned end points produce a static right margin. Thus, a skilled artisan would have understood this process of Alam as “comparing alignment of the horizontal beginning point, horizontal midpoint, and horizontal end point of clusters between lines” (claim 1), where “clusters between lines” reads on the page lines forming an evaluated horizontal projection profile.

Appellant also argues that Alam does not teach “identifying a line as being part of a table in response to more than one cluster of the line being aligned with clusters of previous lines identified as part of the table” (Br. 5). In doing so, Appellant contends that Alam provides “no apparent reference to the use of alignment of more than one cluster between a line and a previous line in the identifying of a line as being part of a table” (Br. 6); and further contends that Alam “locates boundaries of a table and does not identify a line as being part of a table based on alignment of clusters” (*Id.*). However, the Examiner finds that Alam’s teaches such step (Ans. 6).

Accordingly, another issue we address on appeal is whether Alam teaches “identifying a line as being part of a table in response to more than one cluster of the line being aligned with clusters of previous lines identified as part of the table” (claim 1).

Alam locates tables by evaluating a document’s horizontal projection profile, i.e., white space in the horizontal direction (FF 3). We find that Alam thereby identifies a current page line and previous page line as part of the same table in response to their left-most and right-most clusters being aligned, i.e., in response to their horizontal projections being the same. Thus, a skilled artisan would have understood Alam as “identifying a line as being part of a table in response to more than one cluster of the line being aligned with clusters of previous lines identified as part of the table” (claim 1), where “more than one cluster of the line” reads on the left-most and right-most clusters of a current table line and the “clusters of previous lines identified as part of the table” reads on the left-most and right-most clusters of a previous table line.

Accordingly, for the above reasons, we conclude that Appellant has not shown the Examiner erred in rejecting claim 1, and claims 5, 7, 12, and 16 falling therewith, as anticipated by Alam under 35 U.S.C. § 102.

Claims 3 and 9

Claim 3 depends from claim 1 and recites,

using the word clusters to generate column position information, wherein the column information includes for each column a horizontal beginning point, horizontal midpoint, and horizontal end point; and

updating the column position information by performing a union operation between the column position information of a previous line and the column position information of a current line.

According to Appellant, “Alam appears to be silent on any use of a horizontal midpoint of a column” and “there is no apparent teaching or suggestion by Alam that the word clusters are used to generate column information that includes a horizontal midpoint” (Br. 10-11).

Contrary to Appellant’s argument, claim 3 does not require that the column position information be generated by word clusters. In fact, claim 3 does not place any limitation on what “column position information” means, includes, or represents, other than that it “includes for each column a horizontal beginning point, horizontal midpoint, and horizontal end point.” We interpret “column position information” as reading on the mere position of any format block that is arranged within a column and has horizontal beginning, middle, and end points, e.g., as reading on the vertical and/or horizontal position of any paragraph, table, or line.

Claim 3 also does not place any limitation on what “updating the column position information by performing a union operation” means or represents, other than that it requires the use of column position information for a previous line and current line. We interpret “updating the column position information by performing a union operation” as reading on any determination of column position that is based on the column position of a previous line and current line.

As explained with respect to claim 1, we find that Alam adds page lines to paragraphs and tables based on whether a current page line and

previous page line are aligned. We also find, consequently, that Alam determines a paragraph's or table's vertical column position based on the horizontal column positions of a current line and previous line. A skilled artisan would have therefore understood Alam as "updating the column position information by performing a union operation between the column position information of a previous line and the column position information of a current line" (claim 3), where "updating the column position information" reads on adding a page line to a paragraph or table.

Accordingly, we conclude that Appellant has not shown the Examiner erred in rejecting claim 3, and claim 9 falling therewith, as anticipated by Alam under 35 U.S.C. § 102.

Claims 18, 19, and 20

Claim 18 depends from claim 1 and recites, "determining whether the number of word clusters in a line is greater than a threshold value; and classifying the word clusters in the line as a row of a table in response to the number of word clusters in a line being greater than the threshold value." Appellant argues that the cited teaching of Alam merely "determines whether a word is in the current line based on the distance between that word and another word in the current line" and does not determine whether that current line is part of a table (Br. 11-12).

Alam's process of locating tables includes evaluating the horizontal projection of a line or lines (FF 3). We find that this process includes determining whether a line has at least one word cluster, because the line would otherwise have no horizontal projection. Consequently, we find a skilled artisan would have understood Alam as "determining whether the number of word clusters in a line is greater than a threshold value" (claim

18) of zero; and as “classifying the word clusters in the line as a row of a table in response to the number of word clusters in a line being greater than the threshold value” (claim 18).

Accordingly, we conclude that Appellant has not shown the Examiner erred in rejecting claim 18, and claims 19 and 20 falling therewith, as anticipated by Alam under 35 U.S.C. § 102.

VI. CONCLUSION

Appellant has not shown that the Examiner erred in finding that claims 1, 3, 5, 7, 9, 12, and 15-20 are anticipated by Alam.

VII. DECISION

The Examiner’s decision rejecting claims 1, 3, 5, 7, 9, 12, and 15-20 under 35 U.S.C. § 102 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

peb

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